

**Middle Rio Grande Endangered Species Collaborative Program
Habitat Restoration Workgroup (HRW) Meeting
13 December 2011, Tuesday
12:30-3:30 pm at Interstate Stream Commission**

Actions

- Tetra Tech will email the updated versions of the 2011 Accomplishments and the 2012 Work Plan to Monika Sanchez and Michelle Mann.
- Ondrea Hummel will find out if inundation at different depths will be provided in the Tetra Tech maps.
- Robert Padilla will find out if the shapefiles from Reclamation's suitability monitoring can be provided to the HRW.
- Ondrea will email the pdfs of the Tetra Tech maps to the work group for comments.
- Ondrea and Robert Padilla will ask Jericho if he still needs the System Wide Analysis project and the Design and Environmental Compliance SOWs
- Ondrea Hummel will update the Design and Environmental Compliance Support for HR Projects and Habitat Restoration Implementation SOWs for CC review (*Ongoing from 11/15*)
- Grace Haggerty will check with Chris S. to determine options to decrease the predicted spread of depletions between OSE & ET toolbox (*Ongoing from 10/18*).

Decisions

- The November 15th, 2011 HRW meeting minutes were approved with no changes.

Meeting Summary

- Rick Billings brought the meeting to order and introductions were made. The agenda was approved with the addition of a discussion on the draft maps from Tetra Tech.
- Meeting attendees viewed a presentation from Chi Bui on the *Application of HEC-HMS 3.4 in Estimating Streamflow of the Rio Grande under Impacts of Climate Change*. The objective of the project was to calibrate a 30-year HEC-HMS model for the streamflow of the Rio Grande and to use the model to project the impacts on the streamflow for the near and long term future under wet, mid, and dry scenarios. Projections for the worst scenario estimate a 169 kAF debt caused by a 7.9 F increase in temperature and a 15.6% decrease in precipitation. Projections for the best scenario estimate a 49 kAF debt due to 3.1 F increase in temperature and a 1.6% increase in precipitation. The model results and delivery obligations are based on rain fall and runoff and do not include reservoir operation.
- The November 15th, 2011 HRW meeting minutes were approved with no changes.
- Meeting attendees reviewed the November 2011 action items. All action items were completed with the exception of one ongoing action item; Ondrea Hummel updated meeting attendees that the Design and Environmental Compliance Support for HR

Projects and Habitat Restoration Implementation Scopes of Work (SOWs) will be completed by the December 16th, 2011 deadline.

- Meeting attendees discussed the November 15th, 2011 Joint Workgroup meeting. General feedback provided at the meeting was that the work groups would like more specificity on CC requests and would like more interaction with project contractors and Contracting Officer's Technical Representatives (COTRs). Attendees were updated that the work group Co-Chairs are discussing having quarterly conference calls to keep each other up-to-date on what other work groups are working on.
- Meeting attendees reviewed the 2011 Accomplishments and the 2012 Work Plan. Major changes included compiling the Adaptive Management Planning workshops into a single task in the 2011 Accomplishments and the addition of a task to "Coordinate with other work groups" in the 2012 Work Plan. Updates were also made to the work group members list. Tetra Tech will email the updated versions of the 2011 Accomplishments and the 2012 Work Plan to Monika Sanchez and Michelle Mann.
- Meeting attendees discussed the CC Request: The HR work group should review the reduction of the Program-Wide System Monitoring project estimate to <\$100,000; the group should review the project viability for this funding cycle (FY 2012) given the timing of the DBMS, adaptive management, and RIP development. Meeting attendees agreed to reduce the project estimate to \$50,000 and to send a request to the U.S. Army Corps of Engineers (the Corps) to fund the remainder of the project. The HRW understands the budget constraints but considers the Program-Wide System Monitoring project to be an important task and would like to move the project forward to the extent that they can.
- Meeting attendees discussed the possibility of utilizing the Population Viability Assessment (PVA) models to improve restoration efforts. The modelers have indicated that the model can be useful in predicting the scale of habitat restoration that will have an effect on the demographics of the flycatcher and minnow if all the needed information is available; however a quantitative standardized measurement of habitat quality will be needed. The models may also be able to project future habitat availability to assist the work group in determining where the focus should be for the short, mid, and long term. The Biological Opinion (BO) is the priority for the PVA but it's hoped that once the BO is in order the models will be able to be used to support habitat restoration. The PVA models are scheduled to be delivered at the end of June 2012 and it's believed that there will be trainings on the models in April or May.
- Meeting attendees reviewed the draft maps of the San Acacia Reach from Tetra Tech. Initial feedback included having the maps provided panel by panel as opposed to being overlaid. Meeting attendees also indicated that they would like 3 maps on each page displaying vegetation, hydrology, and flycatcher territories for 5 miles of the reach at a time. The proposed actions should also be provided electronically as shapefiles and in the same 5 mile format. It was suggested that the existing information on the reach be provided on a map of the entire reach. It was asked if the inundation at different depths would be provided; Ondrea Hummel will find out if inundation at different depths will be provided. It was also asked if shapefiles from suitability monitoring for the flycatcher and vegetation in the SAR that was completed by Reclamation could be provided to the workgroup to assist them in considering habitat restoration projects; Robert Padilla will

find out if the shapefiles can be provided to the HRW. Ondrea will email the pdfs of the Tetra Tech maps to the work group for comments.

- Meeting attendees expressed frustration that the Program-Wide System Monitoring was not included in the projects funded in FY12 as it is believed that the project will be important in determining the baseline for the system and will help to move the Recovery Implementation Program (RIP) Action Plan forward. Frustration was also expressed that the Design and Environmental Compliance project was chosen to receive funding before the Program-Wide System Monitoring project as the work group has expressed that the Program-Wide System Monitoring is their priority project. It was explained that the Program-Wide System Monitoring may not have been included in the FY12 projects because the work group has begun a pilot reach analysis that will help the work group determine what a larger scale analysis would include; it was also pointed out that because the Design and Environmental Compliance project is an IDIQ it can be made to be broad enough to include evaluation tools and potentially be used to complete some of the tasks for the Program-Wide System Monitoring project. The work group did not know if Jericho Lewis (Reclamation Contracting Officer) still needs the Program-Wide System Monitoring and the Design and Environmental Compliance SOWs; Ondrea and Robert Padilla will ask Jericho if he still needs the Program-Wide System Monitoring project and the Design and Environmental Compliance SOWs.
- Meeting attendees discussed whether or not to change the frequency of their meetings. It was explained that the workgroups have been asked to meet less frequently in order to accommodate for additional time that some U.S. Fish and Wildlife Service (Service) staff will be spending to work on the Biological Assessments (BAs) and Biological Opinion (BO). Because Gina is not involved with the BA/BO and the work group has just begun their analysis of the reaches, meeting attendees agreed to continue to meet monthly and will cancel meetings if there is not a need for the group to meet.

Next Meeting: January 17th, 2012 from 12:30 PM to 3:30 PM at ISC

- Potential agenda items include: (1) update on SOWs; (2) reviewing and working through the Tetra Tech maps;
- Future agenda items: Presentation on the ET Tower Project (Gina; February)

**Middle Rio Grande Endangered Species Collaborative Program
Habitat Restoration Workgroup (HRW) Meeting
13 December 2011, Tuesday
12:30-3:30 pm at Interstate Stream Commission**

Meeting Notes

Introductions and Agenda Approval

- Rick Billings brought the meeting to order and introductions were made.
- Meeting attendees briefly discussed the Contract Officer's Technical Representative (COTR) Interaction agenda topic to see if it still needed to remain on the agenda.
 - The only question regarding meeting attendees had been what more interaction with project COTRs would include.
 - It was believed that more interaction would mean that COTRs would report out to the work group on the status of projects and would notify the workgroup of upcoming deliverables.
- The agenda was approved with the addition of a discussion on the draft maps from Tetra Tech.

Climate Change Presentation (Chi Bui)

- Meeting attendees viewed a presentation from Chi Bui on the *Application of Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS) 3.4 in Estimating Streamflow of the Rio Grande under Impacts of Climate Change*. The project was Chi's thesis project that she defended in April 2011. *For specific details please see actual presentation materials.*
 - The project is based on tree ring constructions that suggest that the region experienced a variety of climate extremes. The objective of the project was to calibrate a 30-year continuous HEC-HMS model for the streamflow of the Rio Grande and to use the model to project impacts of climate change on the streamflow for the near and long term future.
 - Sources of climate change data.
 - Temperature and weather data predicted in the Inter-governmental Panel on Climate Change's (IPCC) Fourth Assessment Report was used for the project. Smith and Wagner suggest 3 scenarios (dry, middle, and wet) and two future periods near and long term (2030 and 2080).
 - To determine if the scenarios could be used for the HEC-HMS model the projections were compared to projections from Hurd & Coonrod for climate change scenarios for winter and summer. Because the Hurd & Coonrod projections were within the IPCC projections it was determined that the IPCC data could be used as input to the HEC-HMS.
 - Terrain model
 - Terrain data from U.S. Geological Survey's (USGS) database was also put into the model; the Geoextension of GIS was used to delineate the watershed into 21 different sub-basins.

- And, soil data for New Mexico and Colorado from the State Soil Geographic (STATSGO) Database was used to calculate the infiltration rate.
- Current temperature and precipitation for Elephant Butte Reservoir was used to calibrate the model and a 10 year run from 1971 to 1980 was completed. Statistical error analyses were then completed to verify and validate the modeled streamflow by comparing the 1971 to 1980 model run to the observed streamflow data from 1971 to 1980. The comparison was made at two locations: Del Norte and La Puente; these locations were chosen because they are the largest contributing areas to the Rio Grande.
 - The statistical error analyses consisted of :
 - Peak weighted root mean error - This analysis gave a lot of weight to the errors closest to the peaks.
 - Sum of squared residuals - This analysis gave more weight to larger errors than smaller errors.
 - Sum of absolute residuals - This analysis gave the same weight to all errors.
 - The modeled streamflow matched the observed data from 1971 to 1980 well and performed well on the statistical error analyses with errors at less than 10% for all three analyses.
- Because the model performed well it was expanded from a 10-year model to a 30-year model from 1971 to 2000.
 - The monthly average of the streamflow data for the 30-year calibrated model from 1971 to 2000 was very close to the observed data for the Elephant Butte Reservoir outlet.
 - For the projections for Elephant Butte Reservoir temperature and precipitation were input after the calibration.
- The spring flow for the Elephant Butte outlet and Otowi gauge under the 6 climate change scenarios (2030 -wet, mid, dry; and 2080 - wet, mid, dry) were projected.
 - Projections at the index gauges show up to 55% less volume in the future. The projected temperatures for the best and worst 2030 and 2080 conditions were plotted to see the impact of the temperature at the two gauges. Based on the stream flow at Ottowi gauge, New Mexico will know how much to deliver to Texas at Elephant Butte Reservoir and how much can be used by New Mexico.
 - The projections for the best and worst scenarios predict that as we move further into the future, without any decisions on reservoir operations (only rainfall), obligations cannot be met.
 - Projections for the worst scenario estimate a 169 kAF debt caused by a 7.9 F increase in temperature and a 15.6% decrease in precipitation.
 - Projections for the best scenario estimate a 49 kAF debt due to 3.1 F increase in temperature and a 1.6% increase in precipitation.
 - The model results and delivery obligations are based on rain fall and runoff and do not include reservoir operation.

- Questions
 - *Question:* Are there plans to incorporate reservoir operations into the projections? *Response:* There are not currently plans to incorporate reservoir operations. In order to account for reservoir operations the model would need to be combined with a model that can incorporate reservoir operations.
- Chi was thanked for her presentation.

Announcements

- There were no announcements.

Approve November 15th, 2011 HRW meeting Minutes.

Decision: The November 15th, 2011 HRW meeting minutes were approved with no changes.

Action Item Review

- November Action Items
 - Ondrea Hummel will update the *Design and Environmental Compliance Support for HR Projects* and *Habitat Restoration Implementation SOWs* for CC review.
 - Ongoing; the Design and Environmental Compliance Support for HR Projects and Habitat Restoration Implementation Scopes of Work (SOWs) will be completed by the December 16th, 2011 deadline.
 - ✓ Monika Sanchez will check with Grace Haggerty to see if the HRW meetings can still be held at Interstate Stream Commission (ISC).
 - The HRW can continue to hold their meetings at ISC.
 - Meeting attendees briefly discussed whether or not to change the frequency of their meetings.
 - It was explained that the workgroups have been asked to meet less frequently in order to accommodate for additional time that some U.S. Fish and Wildlife Service (Service) staff will be spending to work on the Biological Assessments (BAs) and Biological Opinion (BO).
 - Because Gina (the Service HRW member) is not involved with the BA/BO and the work group has just begun their analysis of the reaches, meeting attendees agreed to continue to meet monthly and will cancel meetings if there is not a need for the group to meet.
 - ✓ Monika Sanchez will verify that Chi Bui is still able to present at the December HRW meeting.
 - Complete.

Discussion on the November 15th, 2011 Joint Work group meeting

- Meeting attendees discussed the November 15th, 2011 Joint Workgroup meeting.
 - General feedback provided at the Joint Workgroup meeting was that the workgroups would like more specificity on Coordination Committee (CC) requests and would like more interaction with project contractors and Contracting Officer's Technical Representatives. Feedback from the Joint Workgroup meeting is planned to be relayed to the CC by the Program Management Team (PMT).

- At the Joint Workgroup meeting there were also comments about having more interaction among the work groups.
 - Attendees were updated that the workgroup Co-Chairs are discussing having quarterly conference calls to keep each other up-to-date on what other workgroups are working on.
- It was commented that it can be difficult to balance tasks even if the majority of your time is allocated for the Program. Even with monthly meetings it can be difficult to keep track of what's going on in the workgroups.

Review/approve 2011 Accomplishments and 2012 Work Plan

- Meeting attendees reviewed the 2011 Accomplishments and the 2012 Work Plan. Major changes included compiling the Adaptive Management Planning workshops into a single task in the 2011 Accomplishments and the addition of a task to “Coordinate with other work groups” in the 2012 Work Plan. Updates were also made to the work group members list.

Action: Tetra Tech will email the updated versions of the 2011 Accomplishments and the 2012 Work Plan to Monika Sanchez and Michelle Mann.

CC Request: The HRW should review the reduction of the Program-Wide System Monitoring (System Monitoring) project estimate to <\$100,000; the group should review the project viability for this funding cycle (FY 2012) given the timing of the DBMS, adaptive management, and RIP development.

- Meeting attendees agreed to reduce the project estimate to \$50,000 and to send a request to the U.S. Army Corps of Engineers (the Corps) to fund the remainder of the project.
- The HRW understands the budget constraints but considers the System Monitoring project to be an important task and would like to move the project forward to the extent that they can.

FY12 Scopes

- The Design and Environmental Compliance Support for HR Projects and Habitat Restoration Implementation SOWs will be completed by the December 16th, 2011 deadline.
- Attendees were reminded that the work group agreed at the last HRW meeting to include the work group's priority projects and reaches in the Habitat Restoration Implementations SOW.

Report out on December PVA meeting

- Attendees were given an update on the Population Viability Analysis (PVA) workgroup meeting on December 12th and 13th, 2011. This is the first time the PVA workgroup has met in 6 months. The RAMAS modeler, Phil Miller, is back on contract.
 - One of the issues discussed at the PVA meeting is the difficulty in determining how habitat restoration work has affected the minnow.
 - One of the HRW's interests with the PVA models is to see if they can be used to improve habitat restoration efforts. The HRW is also interested in how habitat restoration work can contribute information to the models.

- It's hoped that the models will one day get to the point of being able to determine how an amount of acreage can best be used to have the greatest affect on the demographics of the species. The modelers have indicated that the model can be useful in predicting the scale of habitat restoration that will have an effect on the flycatcher and minnow if all the needed information is available; however a quantitative standardized measurement of habitat quality will be needed.
 - In order to determine a standardized measurement of habitat, it will need to first be determined whether minnow are really spawning in certain areas and why they are at certain locations at certain times. There are times when a habitat has been built and it has been observed that minnow numbers in the area have increased but it's not known which features have made the habitat more appealing.
- At the PVA workgroup meeting, there was discussion of building an offsite channel that is a larger scale effort than the refugium, so that flows could be controlled.
- It was pointed out that since habitat is one of the few components that can be managed that the Program needs to understand restoration. One way to help determine if restoration is affecting the species is to utilize different techniques like the models.
- It was asked if the PVA has been able to analyze what habitat quality is available under different flow regimes.
 - The modelers will be looking at this largely with some of the geological surveys.
 - The data could be projected onto a reach based on existing cross section and aerial data to get a better sense of the conditions in the reach and what habitat availability will be like in the coming years. The models may also be able to project future habitat availability to assist the workgroup in determining where the focus should be for the short, mid, and long term.
- Currently, the BO is the priority for the PVA models but it's hoped that once the BO is completed the models will be able to be used to support habitat restoration.
 - The PVA models are scheduled to be delivered at the end of June 2012 and it's believed that there will be trainings on the models in April or May.
 - The Bureau of Reclamation (Reclamation) BA will be sent to the Service around June 2012 as well. The Corps' BA has already been delivered to the Service.
- It's not known if the mesohabitat modeling that Mick Porter is doing will be utilized by the models.
 - It was commented that the mesohabitat modeling will provide information about what habitat features the minnow are using. A good next step would be to try to map some floodplain features when they are inundated to see which of those features the minnow are utilizing.
 - It would also be useful to model the in-channel habitat in low flow years to see where the fish go when flows are low; there may be ways to help create in-channel areas for spawning.

- Attendees briefly discussed that the Population Habitat Viability Assessment (PHVA) work group has been using the Upper Rio Grande Water Operations Model (URGWOM) to model hydrology. They have had some discussion with the PVA work group and have sent a letter responding to PVA requests but they haven't provided input for the models yet.
- Attendees also briefly discussed the Program moving towards becoming a Recovery Implementation Program (RIP). Executive Committee (EC) members have been working on how to evaluate the success of the RIP. This could change the focus of the potential work groups.
 - The Program will need a "report card" to show see where they are at now in terms of recovery and part of it will be an evaluation of habitat. Standardized measurements of habitat quality will be needed to grade habitat improvements.
 - Discomfort was expressed with using the number of acres improved as a measurement of habitat quality.
 - Fish inundated acres or velocity diversity may be options for general measurements to hone in on the positive changes that have been made.
 - It was pointed out that one difficulty with measuring the habitat for improvement is that water habitats shift.
 - It was suggested that fishery staff be consulted to see how to develop a metric for habitat.

Review the draft Maps from Tetra Tech

- Meeting attendees reviewed the draft maps of the San Acacia Reach (SAR) from Tetra Tech.
 - Initial feedback included having the maps provided panel by panel as opposed to being overlaid to make things easier to see. Meeting attendees also indicated that they would like 3 maps on each page displaying vegetation, hydrology, and flycatcher territories. In order to get a more detailed view, the maps should also only show 5 miles of the reach at a time.
 - It was asked if the inundation at different depths will be provided.
 - It was not known if the inundation at different depths was a part of this task order.
 - The work group may need to discuss which discharges they would like modeled to show inundation and depth.

Action: Ondrea Hummel will find out if inundation at different depths will be provided in the Tetra Tech maps. She will also find out when the workgroup can start turning on other tasks.

- The proposed actions should also be provided electronically as .mxd files and in the same 5 mile format. This will allow the HRW to view the proposed actions against what is currently there and the vegetation/hydrology to evaluate whether what is proposed is realistic.
- The existing projects/information on the reach can be provided on the first page on a single map of the entire reach.
- The draft SAR maps can be used as a pilot to see how the maps will be most useful for a reach analysis before maps for the rest of the reaches are done. At the

next meeting, the HRW can use the draft maps and other tools to discuss potential projects for the reach. It was asked if the suitability monitoring for the flycatcher vegetation in the SAR that was completed by Reclamation could be provided to the HRW to assist them in considering habitat restoration projects.

Action: Robert Padilla will find out if the shapefiles from Reclamation's suitability monitoring can be provided to the HRW.

- It was shared that the Service is considering using LIDAR in a project to evaluate the structure of vegetation. They will be using LIDAR data from the Corps and return signals to evaluate the density, structure, and age class of the vegetation. This data in combination with Hink and Omar data will give a 3-dimensional idea of what vegetation is like.

Program Update

- Meeting attendees discussed the Program Update: RGSM Fish Passage Study (longitudinal movement) – (HRW/ScW; the study will be revisited in a joint session with consideration of the San Acacia Diversion Dam (SADD) peer review report and to ensure that it is ready to move forward).
 - Meeting attendees were unaware of the status of the RGSM Fish Passage Study (longitudinal movement).
 - There was a question as to whether the study should only address how far minnow move in response to drying or if it should look at how far they move in general.
 - One of things that the workgroup is hoping to do with the reach analysis is look for potential for lateral connectivity. It was said it would be good for the workgroup to determine what they would look at spatially and visually to try to determine where lateral and longitudinal connectivity occurred.
- Meeting attendees discussed the System Monitoring activity not being included in the list of activities to be funded by the \$3.6M that was approved.
 - Meeting attendees expressed frustration that the System Monitoring project was not included in the projects funded in FY12 as it is believed that the project will be important in determining the baseline for the system and will help to move the RIP Action Plan forward
 - It was explained that the 3.6M was what was presented to the EC. It was also explained that one of the reasons that the System Monitoring activity fell below the 3.6M mark was that the workgroup is doing the pilot study of the reach analysis and it might make more sense for the workgroup to finish the pilot reach analysis to determine what would be included in System Monitoring before a larger scale analysis is funded.
 - The System Monitoring will help the Program determine a baseline for where the Program is at towards recovery of the species.
 - The BAs may describe the baseline for where the Program is at towards recovery of the species.
 - The Program also still needs to determine what the key components of habitat restoration are.
 - An intense analysis of the river system is needed. If mesohabit will be generalized to attributes of habitat suitability or quality or some metric that can be measured on the river, it has to fold into

the simplified characteristics that are being gathered for each of the reaches. If analyses on mesohabitat availability, structural vegetation, or periodic inundation were needed then they would be sent to a subcontractor to tease out how habitat suitability would be quantified.

- It was suggested that the HRW complete a SOW for the System Monitoring activity so that it is ready if additional funding becomes available.
- The work group did not know if Jericho Lewis (Reclamation Contracting Officer) still needs the System Monitoring and the Design and Environmental Compliance SOWs.

Action: Ondrea Hummel and Robert Padilla will ask Jericho if he still needs the System Monitoring project and the Design and Environmental Compliance SOWs.

- Frustration was also expressed that the Design and Environmental Compliance project was chosen to receive funding before the System Monitoring project as the work group has expressed that the System Monitoring is their priority project.
 - It was pointed out that it might be a good idea to have both of the projects advertised but to indicate that it is the workgroup's preference that the System Monitoring activity be funded first.
 - The System Monitoring would also pull in the low intensity monitoring to help determine what will be needed for high intensity monitoring.
 - Workgroup members can let Ondrea know what their preference is for funding when they submit their comments on the draft SOWs.
 - It was also pointed out that because the Design and Environmental Compliance project is an IDIQ it can be made to be broad enough to include evaluation tools and potentially be used to complete some of the tasks for the System Monitoring project.
- Attendees briefly discussed what will happen to the Adaptive Management Plan (AMP) now that the Program is moving towards becoming a RIP.
 - It's believed that the AMP will be a document for the RIP. It's believed that the idea to incorporate adaptive management into issues with high uncertainty like water management.

Next Meeting: January 17th, 2012 from 12:30 PM to 3:30 PM at ISC

- Potential agenda items include: (1) update on SOWs; (2) reviewing and working through the Tetra Tech maps;
- Future agenda items: Presentation on the ET Tower Project (Gina; February)
- Meeting attendees also discussed continuing to have people come in and present on projects- there is a list in previous notes of presentations that the work group was interested in seeing.
- The workgroup will also need to start working on determining what can be used to measure habitat quality.
 - It was asked if there is funding for the contractors to do monitoring if needed.

- There is funding for the low intensity monitoring and there is also the possibility of funding from the Corps for mapping to be completed in other reaches.

**Habitat Restoration Work Group Meeting
December 13th, 2011 Meeting Attendees**

NAME	POSITION	AFFILIATION	PHONE NUMBER	EMAIL ADDRESS
Rick Billings	HR Co-Chair	ABCWUA	796-2527	rbillings@abcwua.org
Ondrea Hummel	HR Member	COE	342-3375	ondrea.c.hummel@usace.army.mil
Chi Bui	Presenter	Reclamation	974-1529	cbui@usbr.gov
Michael Scialdone	HR Member	Pueblo of Sandia	771-5046	mscialdone@sandiapueblo.nsn.us
Jill Wick	HR Member	NMDGF	476-8091	jill.wick@state.nm.us
Danielle Galloway	HR Member Co-Chair	COE	342-3661	danielle.a.galloway@usace.army.mil
Gina Dello Russo	HR Member Co-Chair	USFWS	575-835-1828	gina_dellorusso@fws.gov
Grace Haggerty		NMISC	383-4042	grace.haggerty@state.nm.us
Robert Padilla	HR Member	Reclamation	462-3626	rpadilla@usbr.gov
Michelle Mann	PMT Member	COE	342-3426	michelle.n.mann@usace.army.mil
Christine Sanchez	Admin support	Tetra Tech, EMI	881-3283	christine.sanchez@tetrattech.com